soa.army.mil – Briefing

As of 21 May 2007 in the Enterprise Business Lab

Soa.army.mil and the EBL

The Enterprise Business Lab (EBL) is Ft. Belvoir's implementation of a true enterprise-level development and proving ground for emerging and advanced technology capable of supporting the Army and the Warfighter. In this briefing, we address the current state of the Lab.

What we cover today…

- **Enterprise-level software integration** focused on Enterprise Service Bus vendor integration.
- **Scalable technology reducing IT costs** focused on server virtualization.
- **Presentation layer support** and how we are leveraging SharePoint 2007 in conjunction with single-signon and federated authentication management.

ESB Vendors

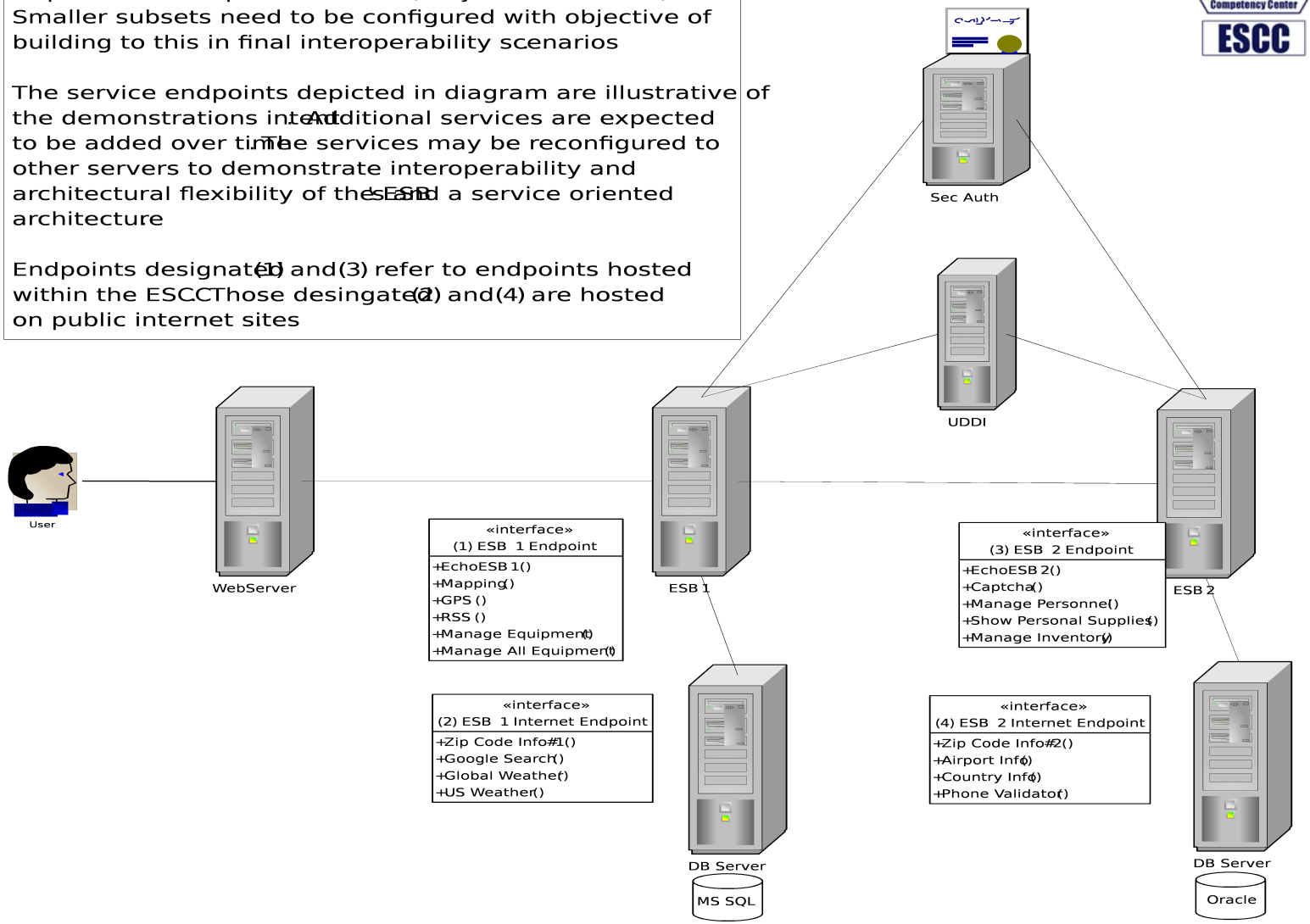
- Invite SOA Vendors into EBL for demonstration of ESB capabilities and interoperability
- IBM
- BEA
- Microsoft
- Tibco
- Oracle

ESB Demonstration Architecture

Depiction of component connectivity (invisible routers/firewalls). Smaller subsets need to be configured with objective of building to this in final interoperability scenarios

The service endpoints depicted in diagram are illustrative of the demonstrations intent. Additional services are expected to be added over time. The services may be reconfigured to other servers to demonstrate interoperability and architectural flexibility of the ESB and a service oriented architecture

Endpoints designated (1) and (3) refer to endpoints hosted within the ESCC. Those desingated (2) and (4) are hosted on public internet sites

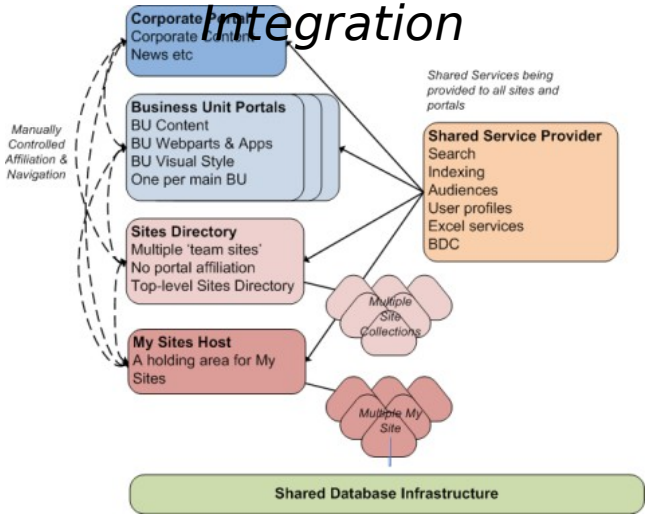


Forward Vision: ESB's

- Give vendors opportunity to demonstrate "real-world" advantages of ESB's and SOA architecture
- Demonstrate interoperability and tiered ESB's and other SOA products
- Based on EBL experiences make available ESCC expertise SOA lessons-learned for the Army
- Ultimately publish and demonstrate ESB experience via SOA.ARMY.MIL

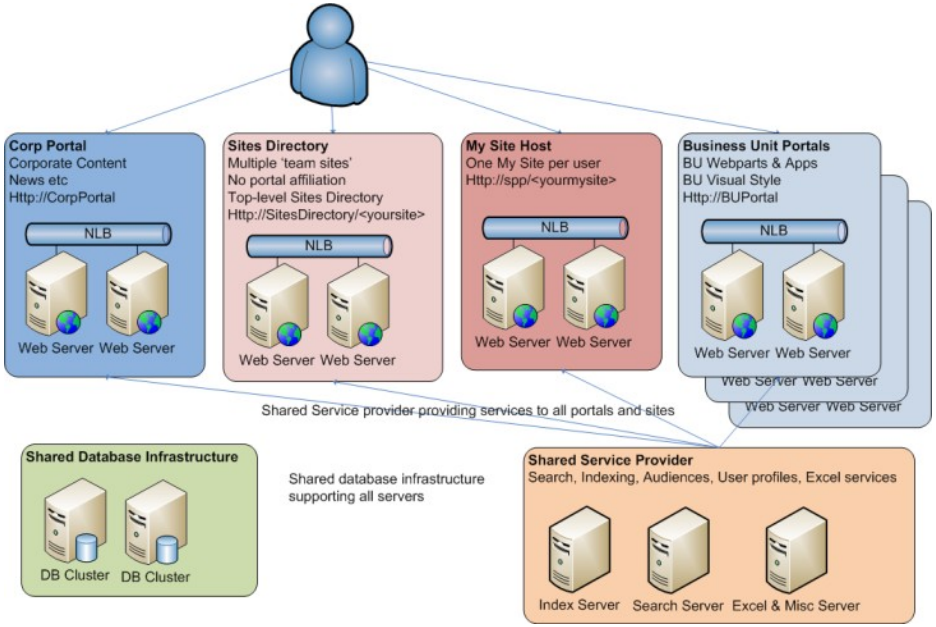
EBL Presentation Layer

SharePoint Logical Integration



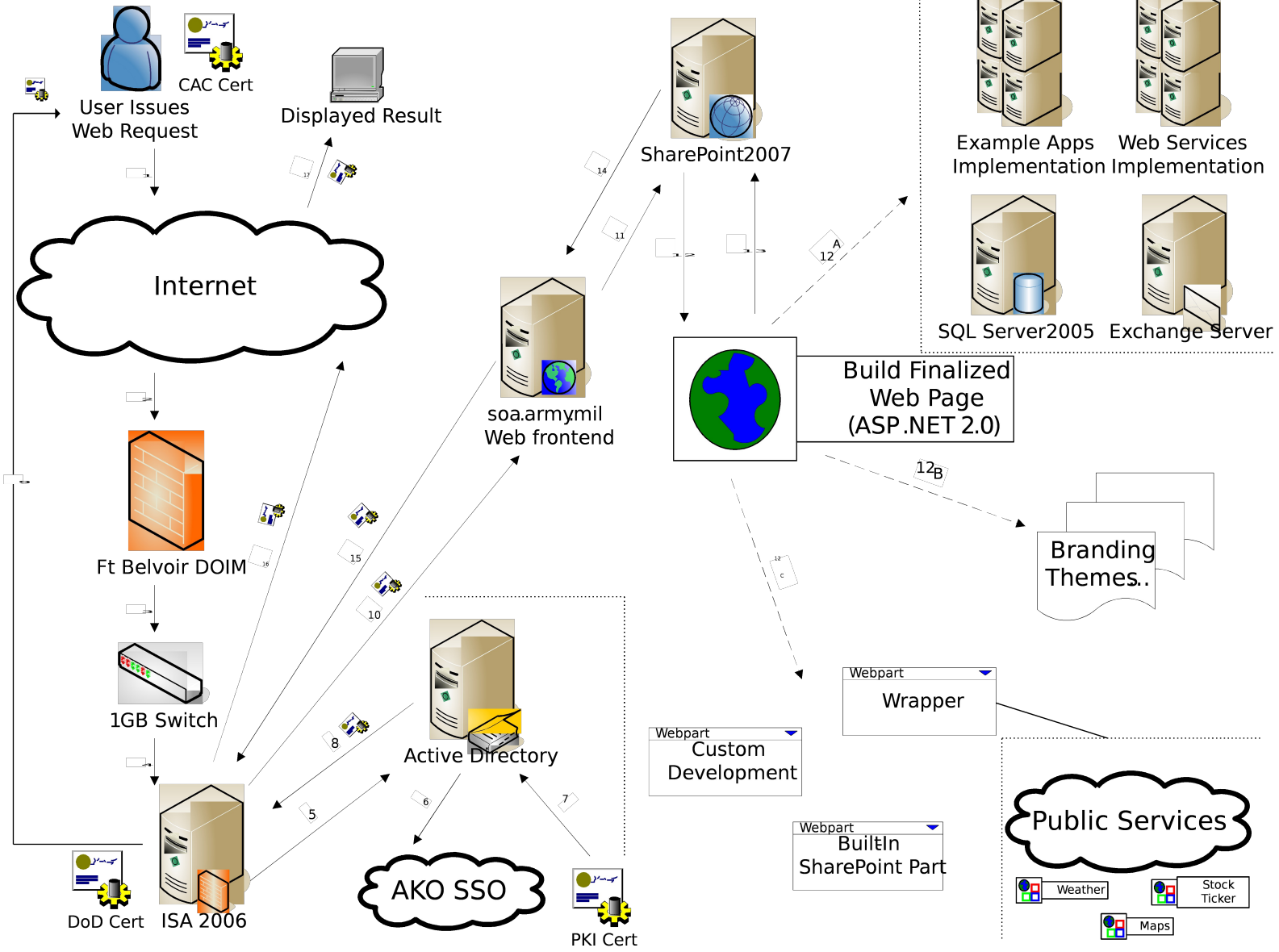
SharePoint 2007 uses a logically separated development model where the front-end portals, sites, and directories tie into a scalable set of common services. The heart of SharePoint 2007 is the backing database layer.

SharePoint Physical Integration

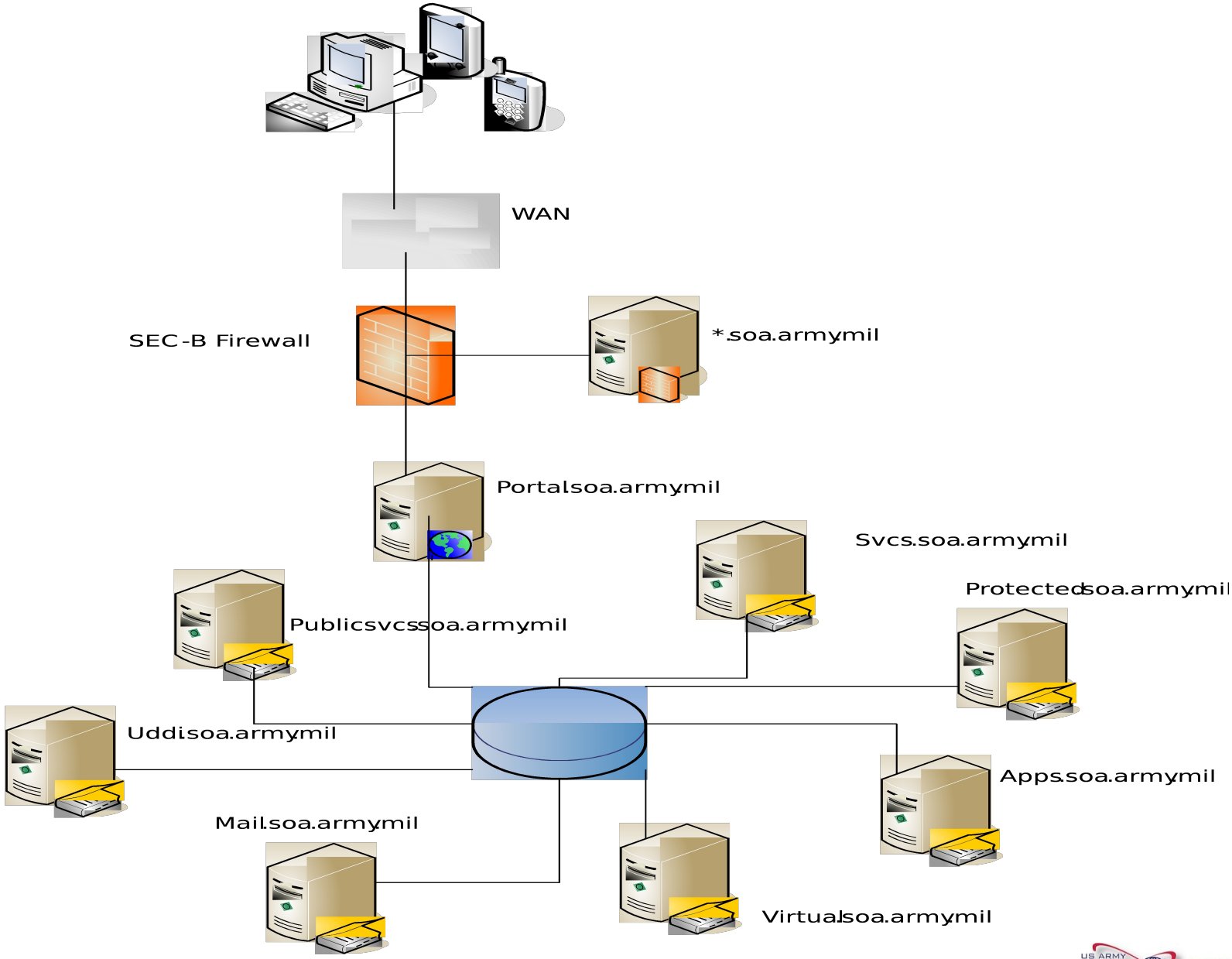


Physically, SharePoint 2007 can be scaled *in any direction*, both at the edge (portal layer) the center (shared services like Search as well as individual server components like Project Server), and third-tier (database farms).

SharePoint2007Within EBL



AKO SSO BREAKDOWN

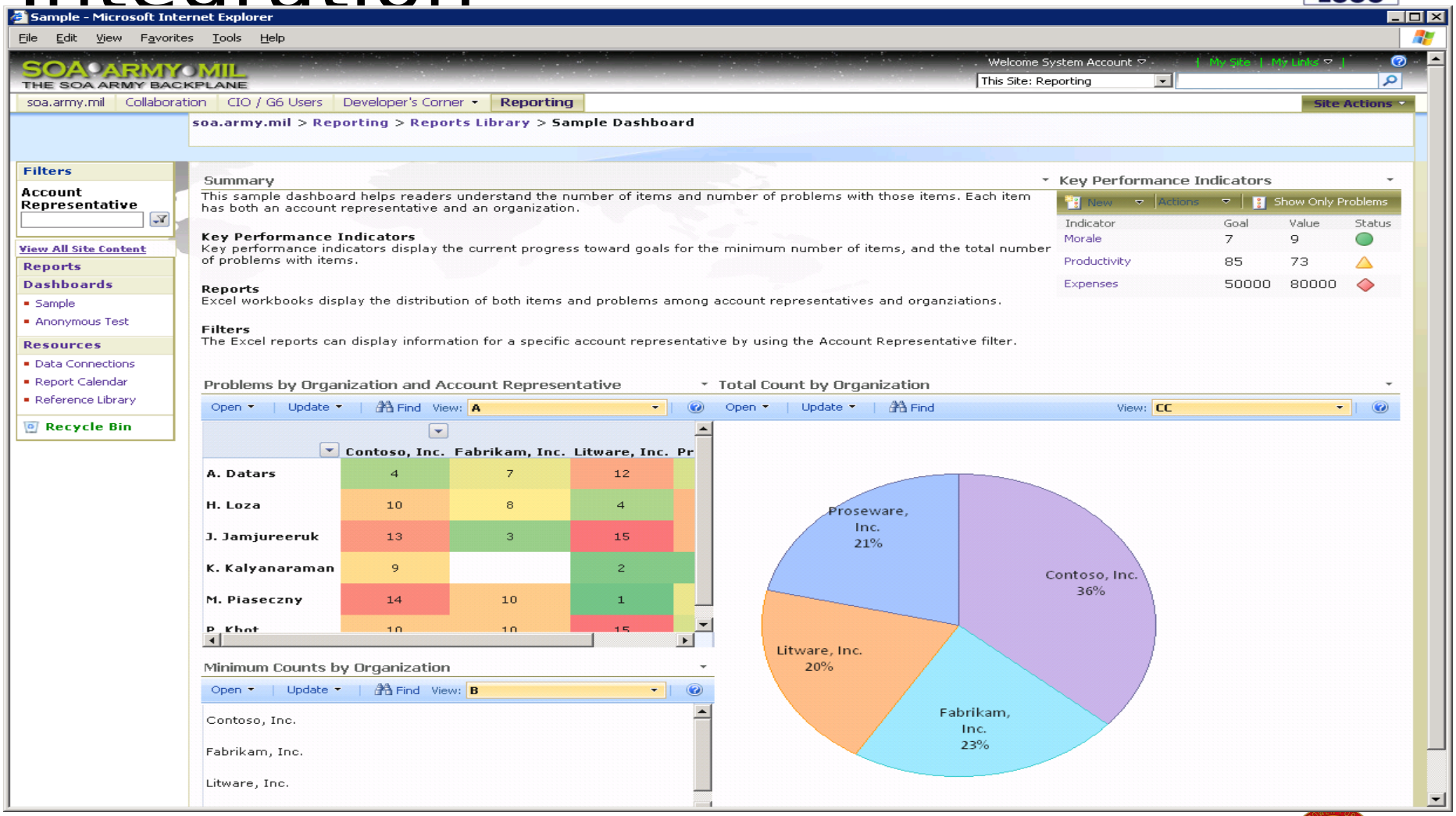


SharePoint Branding

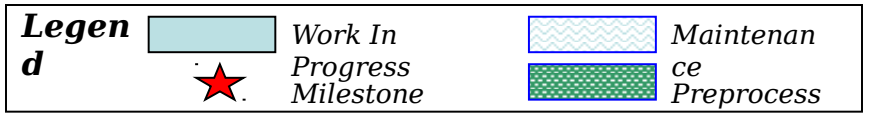
Pages - SOAHomeEsrivera - Microsoft Internet Explorer
https://soa.army.mil/Pages/SOAHomeEsrivera.aspx
US Army
SOA.ARMY.MIL
US Army.mil Home
Sign In
soa.army.mil
Publications
DoDAF Artifacts
Security
Life Cycle Management
ESM
ESB
UDDI
SOA Pilots
Service Oriented Architecture Search
Download PIV Drivers
Get Latest SOA SDK
Sign up for the May Army SOA Working Group
Check your email
Highlights
Upcoming SOA Events
Web Outlook
The Army's SOA Backplane
View All Site Content
SOA Development Home
SOA Information
SOA Overview
Top 10 SOA Benefits
Try one of our Pilots
Help and How-to
SOA Development Help
Get the latest SOA SDK
Get the latest Life Cycle UML Packages
Related Products and Technologies
SOA News...
What's New in the Enterprise Business Lab (EBL)
Welcome to the Enterprise Business Lab !
The Enterprise Solutions Competency Center is making progress in its plan to open the ESCC Enterprise Business Lab (EBL) which will serve as a technology hub where vendors can demonstrate technologies that support Army Business Transformation, and also as environment where Army enterprise services may be developed and tested.
The CIO/G6 Service Oriented Architecture (SOA) Working Group (WG) has developed a number of role-based Army business scenarios that will undergo conversation to Army enterprise services in the EBL. After these scenarios have been converted into software services, Army Commanders and Soldiers will have an immediate and total cross-domain integrated view of his or her personal information, GPS and mapping information, logistics information and company maintenance information.
The CIO/G6 SOA WG will use the resources of the EBL to develop and test services that will enable the war fighter eventually to have an immediate and integrated cross-domain view of his or her information, a first step toward the total awareness picture that Army Transformation seeks ultimately to provide to the war fighter.

- Uses “Master Pages” and “custom themes” to allow completely different user experiences for the same backing content.
- Switching user experiences is trivial, and can be controlled at a single front-end control panel.

SharePoint Dashboard Integration


Sample - Microsoft Internet Explorer
File Edit View Favorites Tools Help
SOA ARMY MIL
THE SOA ARMY BACKPLANE
Welcome System Account
My Site | My Links
This Site: Reporting
soa.army.mil Collaboration CIO / G6 Users Developer's Corner Reporting
Site Actions
soa.army.mil > Reporting > Reports Library > Sample Dashboard
Filters
Account Representative
View All Site Content
Reports
Dashboards
Sample
Anonymous Test
Resources
Data Connections
Report Calendar
Reference Library
Recycle Bin
Summary
This sample dashboard helps readers understand the number of items and number of problems with those items. Each item has both an account representative and an organization.
Key Performance Indicators
Key performance indicators display the current progress toward goals for the minimum number of items, and the total number of problems with items.
Reports
Excel workbooks display the distribution of both items and problems among account representatives and organziations.
Filters
The Excel reports can display information for a specific account representative by using the Account Representative filter.
Key Performance Indicators
New Actions Show Only Problems
Indicator Goal Value Status
Morale 7 9
Productivity 85 73
Expenses 50000 80000
Problems by Organization and Account Representative
Open Update Find View: A
Contoso, Inc. Fabrikam, Inc. Litware, Inc.
A. Datars 4 7 12
H. Loza 10 8 4
J. Jamjureeruk 13 3 15
K. Kalyanaraman 9 2
M. Piaseczny 14 10 1
Total Count by Organization
Open Update Find View: CC
Proseware, Inc. 21%
Contoso, Inc. 36%
Litware, Inc. 20%
Fabrikam, Inc. 23%
Minimum Counts by Organization
Open Update Find View: B
Contoso, Inc.
Fabrikam, Inc.
Litware, Inc.

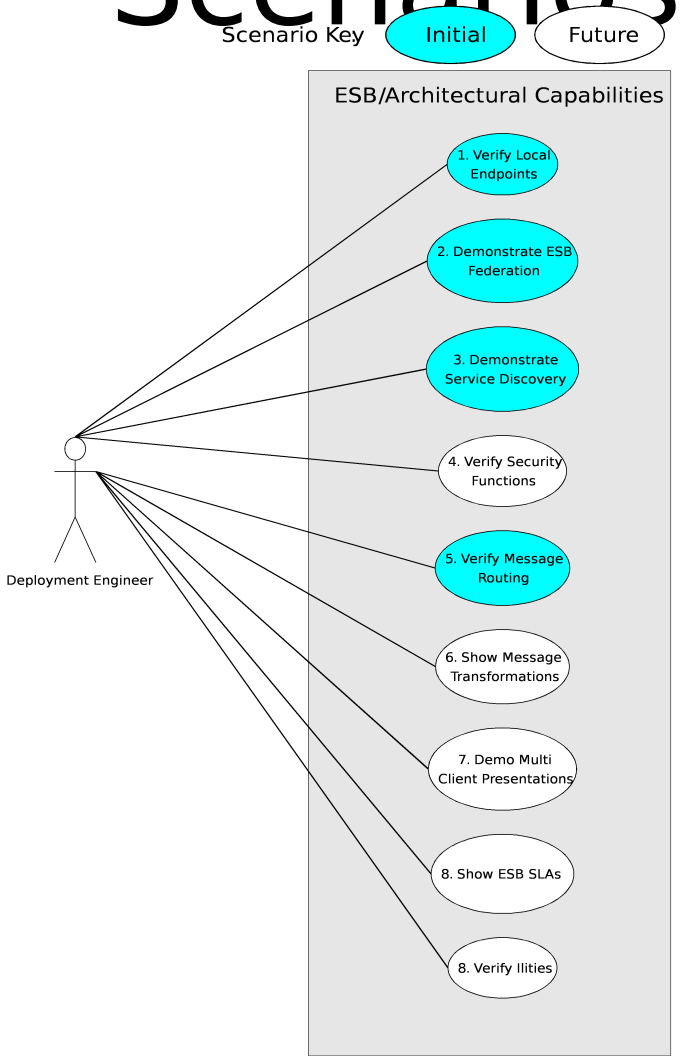
Timeline



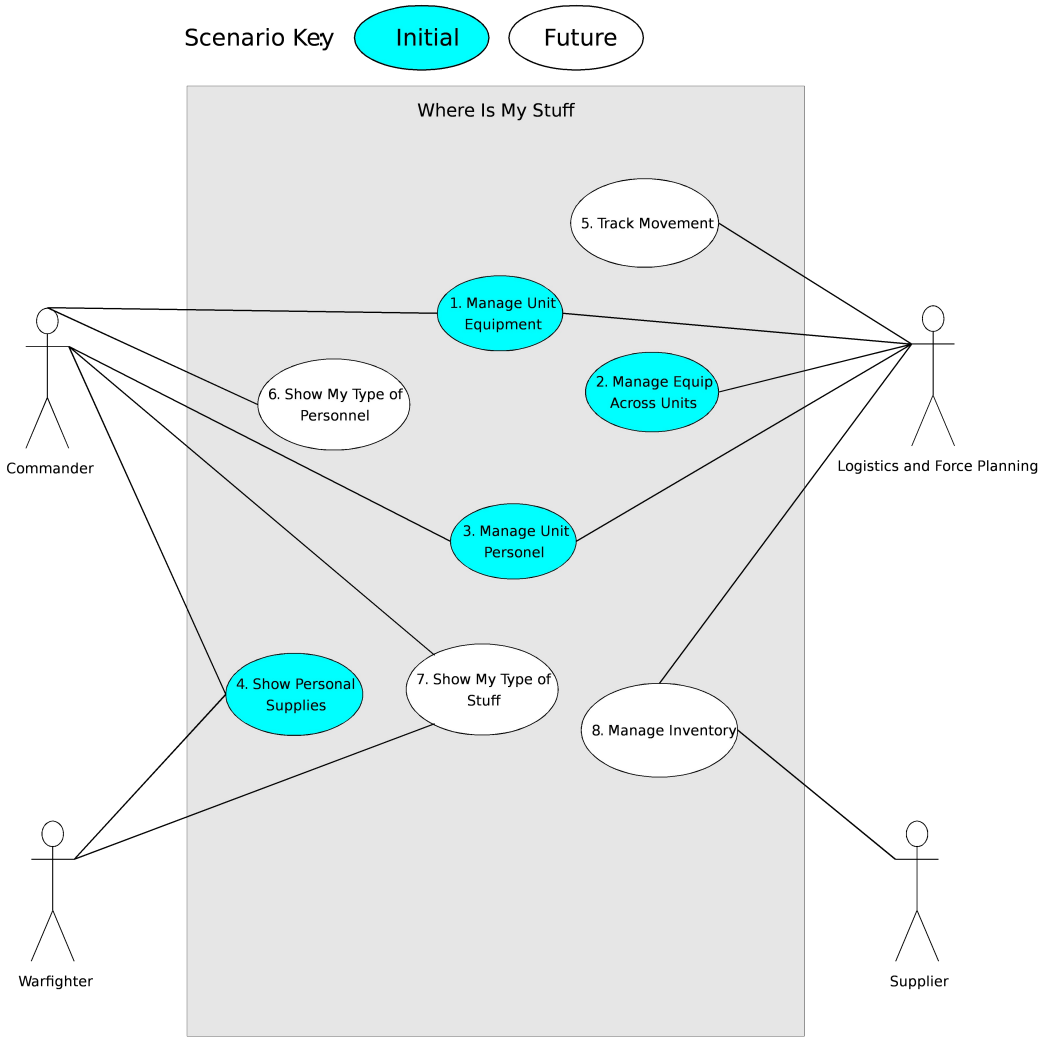
	MAY	JUN	JUL	AUG	SEP	OCT
Hardening Lab (SEC-B Accreditation)						
Lab server virtualization (recreating / provisioning all ESB vendors)						
Configure CAC / AKO SSO with SharePoint 2007						
Validate / Send out initial vendor invitations						
ESB Vendors in EBL (First Set)						
ESB Vendors in EBL (Second Set)						

Backup Slides

ESB Technical Scenarios



ESB Mission Scenarios



Cassatt Collage:
Enabling Utility Computing

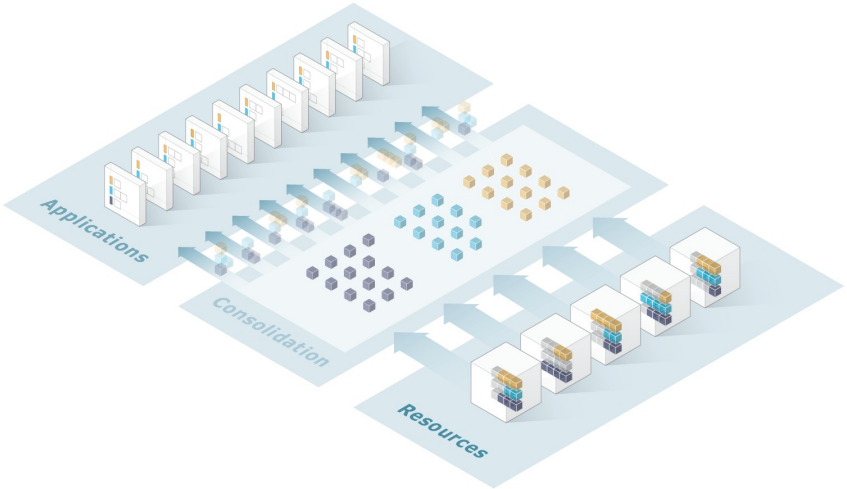
- ***Hardware Virtualization***
  - Increased Hardware ROI
    - SOA lab has 6-1 ratio
    - HP BladeSystem – 10 blades, 60 Virtual Machines
- ***Network Virtualization***
  - Infrastructure Flexibility
    - VLAN Management
- ***Capacity on Demand***
  - Application Priority
- ***High Availability***
  - SLA Requirements
  - Rules Engine
- ***Green Data Center***
- ***Operating System and Software Flexibility***

Hardware Virtualization

- Multi-CPU systems under utilized
- Dual CPU Intel quad-core can run 6 VMs
- 10 Blades turn into 60 VMs
  - All Power Controlled
  - Capacity On Demand
  - Energy Savings
  - P2V and V2P Rollover

Network Virtualization

- VLAN API Control
- Reprovisioning across Virtual LANs
- Capacity-On-Demand



HW and SW Flexibility

- SOA Service Buses
  - TIBCO
  - AquaLogic
  - Oracle
- Web Servers
  - Weblogic
  - JBoss
  - WebSphere
- Databases
  - Oracle
  - MySQL
  - MS SQLServer
  - SAP
- Hardware
  - Any PXE bootable machine
  - Dell, HP, IBM power controlled machines
- Collage enables OS and Application version control

Cassatt Collage:
How Does It Work?

- Resources
- Demand
- QoS/SLA Levels

- Policies
- Priorities
- Goal

- Dynamic resource allocation
- Service Level Automation
- Utility metering & billing

Green Data Center

- XVM and Collage Power Managem
  - IBM
  - HP
  - Dell
- Blade systems
  - IBM
  - HP
  - Hitachi